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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/624,002

07/21/2003

Hidenobu Mikami

1007-020

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EXAMINER

GOLOBOY, JAMES C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

07/21/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/624,002	<b>Applicant(s)</b> MIKAMI ET AL.	
	<b>Examiner</b> JAMES GOLOBOY	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,7 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,7 and 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicant's amendment filed 5/3/10 overcomes the rejection set forth in the office action mailed 2/1/10. New rejections over the references of record, necessitated by the amendment, are given below. Newly added claim 16 is also rejected below.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3, 7, and 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 7, 14-16, and their dependent claims recite an aromatic diurea thickener "represented by the following formula (2)". However, formula 2 is not shown in the current version of the claims. For purposes of examination, the formula 2 shown in previous versions of the claims has been used.

#### ***Claim Rejections - 35 USC § 103***

4. Claims 1, 3, 7, 11-12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama in view of Wulfers.

Kageyama discloses a grease comprising an alkyldiphenyl ether oil and a diurea thickener having a structure meeting the limitations of claim 1. The alkyldiphenyl ether oil and diurea thickener are present in amounts overlapping the ranges recited in claim

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1, and the composition does not contain ester oil. The base oil can contain polyalphaolefins, a synthetic hydrocarbon as recited in claim 3. The R groups recited in claim 7 are within the scope of the ranges recited for the R groups in the thickener of Kageyama. When the base oil consists solely of alkyldiphenyl ether the composition meets the limitations of claim 14. The difference between Kageyama and the currently presented claims is that Kageyama does not disclose a composition comprising sodium sebacate, an additional rust preventative as recited in amended claim 1, or an antioxidant.

Wulfers, in column 1 lines 9-15, discloses urea-thickened greases. From column 4 line 66 through column 5 line 10 Wulfers discloses that the composition can contain sodium sebacate as a corrosion inhibitor. Wulfers also discloses a sodium sulfonate corrosion inhibitor, meeting the limitation of the sulfonic acid salt of an alkali metal recited in the amended claims, and also a glycerol monooleate corrosion inhibitor, meeting the limitations of the partially esterified multivalent alcohol of the amended claims. In Table 1 Wulfers discloses formulations containing 1% by weight of sodium sebacate, within the range recited in claims 1 and 15. The compositions of Table 1 also contain 1% of by weight of Irganox LO-4 and LO-6, which are amine-based antioxidants meeting the limitations of claims 11-12 and 15-16. The addition of sodium sebacate, sodium sulfonate, and antioxidant to the composition of Kageyama meets the limitations of claims 1, 3, 11-12, and 14-15. While Kageyama and Wulfers do not disclose the worked penetration of the composition, it is clear that as the greases Kageyama and Wulfers meet the compositional limitations of the claims, they will have a range of

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worked penetrations at least overlapping the range recited in claim 16, rendering it obvious.

It would have been obvious to one of ordinary skill in the art to include the sodium sebacate, sodium sulfonate/glycerol monooleate and antioxidant of Wulfers in the grease composition of Kageyama in order to impart antirust and antioxidation properties to the composition. It is noted that while Wulfers does not specifically disclose the combination of sodium sebacate and sodium sulfonate or glycerol monooleate, "It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted)

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama in view of Wulfers as applied to claims 1, 3, 11-12, and 14-15 above, and further in view of Minami.

The discussion of Kageyama and Wulfers in paragraph 4 above is incorporated here by reference. Kageyama and Wulfers disclose a grease meeting the limitations of claim 1 but not a bearing containing the grease.

Minami, in paragraph 1, discloses a sealed bearing containing a grease, and in paragraph 9 discloses that the grease comprises an alkyldiphenyl ether and a urea thickener, similar to the grease of Kageyama and Wulfers.

It would have been obvious to one of ordinary skill in the art to use the grease of Kageyama and Wulfers in a sealed bearing, as Minami teaches that urea-thickened greases based on alkyldiphenyl ether oils are suitable lubricants for such bearings.

### ***Response to Arguments***

6. Applicant's arguments filed 5/3/10 have been fully considered but they are not persuasive. Applicant reiterates previous arguments, asserting that Wulfers teaches away from the use of organic grease thickeners due to poor high-temperature stability. However, the examiner maintains that as Kageyama specifically teaches a grease with good high temperature stability, the criticism of Wulfers clearly does not apply to Kageyama. In contrast, there is nothing to suggest the teachings of Wilfers regarding anticorrosion agents would not also apply to Kageyama. Applicant further argues that the claimed compositions give unexpected results, and points to the data presented in the specification. This data is not commensurate in scope with the claims, as discussed in the office action mailed 6/4/09, and therefore is not sufficient to rebut the *prima facie* case of obviousness.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES GOLOBOY whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JCG/

/Glenn A Caldarola/  
Supervisory Patent Examiner, Art  
Unit 1797